

### **REMARKS/DISCUSSION OF ISSUES**

By this Amendment, Applicant cancels claim 19 without disclaimer of the underlying subject matter or prejudice against future prosecution. Applicant also adds new claim 21, and amends claims 1-3, 8, 16-18 and 20. Accordingly, claims 1-18 and 20-21 remain pending in the application.

Applicant acknowledges the indication that claims 3-8, 11-16 and 20 define patentable subject matter over the cited prior art.

Reexamination and reconsideration are respectfully requested in view of the following Remarks.

#### **35 U.S.C. § 101**

The Office Action rejects claims 1-9 under 35 U.S.C. § 101.

Claims 1-8, as amended, recite a computer system for implementing a claimed method, and, as such, explicitly fall under one of the statutory categories of patentable subject matter.

Claim 9 is directed to a computer readable medium. A computer readable medium is at least a "manufacture" - which is one of the statutory categories of patentable subject matter under 35 U.S.C. § 101.

Accordingly, Applicant respectfully requests that the rejections of claims 1-9 under 35 U.S.C. § 101 be withdrawn.

#### **35 U.S.C. § 103**

The Office Action rejects claims 1, 2, 9, 10 and 17 under 35 U.S.C. § 103 over Mark Wolski et al., "*Optimization of Sensor Response Functions for Colorimetry of Reflective and Emissive Objects*," IEEE TRANSACTIONS ON IMAGE PROCESSING Vol. 2, No. 3, March 1996 ("Wolski") in view of Quan et al. U.S. Patent Application Publication 2003/0138141 ("Quan"), and claim 18 under 35 U.S.C. § 103 over Wolski in view of Quan and further in view of Schuurmans U.S. Patent Application Publication 2003/0076056 ("Schuurmans").

Applicant respectfully submits that all of the claims 1, 2, 9, 10, 17 and 19 are

all patentable over the cited art for at least the following reasons.

Claim 1

Among other things, the method of claim 1 includes receiving, via the user interface, a user selection of an RGB filter set; retrieving from a database data describing a spectral response for the selected RGB filter set, and constructing a criteria function describing an error between desired color matching functions and the spectral response of the selected RGB filter set.

Applicant respectfully submits that no combination of the cited art would produce any method including this combination of features. Moreover, Applicant respectfully submits that the teachings of Wolski cannot even be properly modified to produce such a method. Wolski is directed toward the design of arbitrary color filters to sense surface colors given a sample set (e.g., 752 samples) of stimuli and color matching functions. That is, the filter's characteristics are an output of Wolski's criteria-function evaluation process. In contrast, in the method of claim 1 an RGB filter set is first selected and then its spectral response is "plugged into" the criteria function to determine color estimation parameters for substantially optimal color estimation with the selected RGB filter set. That is, the filter's characteristics are an input in the criteria-function evaluation process of claim 1.

So Applicant respectfully submits that no combination of Wolski and Quan could produce the method of claim 1.

Furthermore, Applicant respectfully traverses the proposed combination of Wolski and Quan for at least the following reasons.

At the outset, Applicant respectfully submits that the Office Action fails to establish the level of ordinary skill in the art of invention of claim 1. This is a fundamental requirement for maintaining a rejection under 35 U.S.C. § 103. See M.P.E.P. §§ 2141(II)(C) and 2141.03. Thus the Office Action fails to perform the analysis required by KSR International Co. v. Teleflex Inc., 550 U.S. 398, 82 USPQ2d 1385 (2007) ("KSR") for rejecting a claim under 35 U.S.C. § 103.

Furthermore, a rejection on obviousness grounds under 35 U.S.C. § 103 cannot be sustained by mere conclusory statements: instead there must be some

articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. See M.P.E.P. § 2142 (quoting In re Kahn, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) and KSR 82 USPQ2d at 1396 (2007) (quoting Federal Circuit statement with approval)).

Here, Applicant respectfully submits that the proposed combination of Wolski and Quan is supported only by conclusory statements. The Office Action fails to articulate reasons with rational underpinnings for the proposed modification of Wolski. In particular, the Office Action fails to explain how or why the proposed combination of Wolski and Quan would “*produce an imaging device with a desired level of image quality*,” or why this would have been recognized by one of skill in the art at the time the invention was made without reference to the teachings in Applicant’s own specification.

Accordingly for at least these reasons, Applicant respectfully submits that claim 1 is patentable over the cited art and respectfully requests that the rejection of claim 1 be withdrawn and that claim 1 receive an early allowance.

Claim 2

Claim 2 depends from claim 1 and is deemed patentable for at least the reasons set forth above with respect to claim 1.

Claim 9

Among other things, the computer readable medium of claim 9 stores a computer program comprises: computer readable code for determining color estimation parameters for substantially optimal color estimation with an RGB filter set based upon determined RGB filter set response characteristics.

The Office Action states that Wolski discloses these color estimation parameters for substantially optimal color estimation with an RGB filter set as “*tristimulus vector  $u$  and  $\Delta u$* .”

Applicant respectfully disagrees.

At the outset, Applicant respectfully submits that the tristimulus vector  $u$  has nothing to do with any RGB filter set. As can be seen from equation (3) on page 599, column 1, of Wolski, the tristimulus vector  $u$  depends only upon a chosen

reference white stimulus and the actual XYZ tristimulus vector for a surface being detected (see FIG. 1 of Wolski). So Applicant respectfully submits that the tristimulus vector  $u$  is not a color estimation parameter for substantially optimal color estimation with a RGB filter set based upon determined RGB filter set response characteristics.

Meanwhile,  $\Delta u$  is the difference between a nonlinear transformation of a tristimulus vector describing light from a surface, and a nonlinear transformation of an estimate of this tristimulus vector. Applicant respectfully submits that  $\Delta u$  is not a color estimation parameter for **substantially optimal color estimation** with an RGB filter set.

So Applicant respectfully submits that no combination of Wolski and Quan could produce the computer readable medium of claim 9.

Furthermore, Applicant respectfully traverses the proposed combination of Wolski and Quan with respect to claim 9 for at least the reasons set forth above with respect to claim 1.

Accordingly for at least these reasons, Applicant respectfully submits that claim 9 is patentable over the cited art and respectfully requests that the rejection of claim 9 be withdrawn and that claim 9 receive an early allowance.

Claim 10

Claim 10 depends from claim 9 and is deemed patentable for at least the reasons set forth above with respect to claim 9.

Claim 17

Among other things, the system of claim 17 includes a storage device for storing data describing spectral responses of a plurality of RGB filter sets; a user interface for receiving a user selection of one of the RGB filter sets; a processor configured: to construct a criteria function describing an error between desired color matching functions and the spectral response of the selected RGB filter set.

For similar reasons to those set forth above with respect to claim 1, Applicant respectfully submits that no combination of the cited art would produce any system including this combination of features.

Furthermore, Applicant respectfully traverses the proposed combination of Wolski and Quan with respect to claim 17 for at least the reasons set forth above with respect to claim 1.

Accordingly for at least these reasons, Applicant respectfully submits that claim 17 is patentable over the cited art and respectfully requests that the rejection of claim 17 be withdrawn and that claim 17 receive an early allowance.

Claim 18

Claim 18 depends from claim 17.

Applicant respectfully submits that Schuurmans does not remedy the shortcomings of Wolski and Quan as set forth above with respect to claim 17. So Applicant respectfully submits that claim 18 is patentable over the cited art for at least the reasons set forth above with respect to claim 17.

Furthermore, Applicant respectfully traverses the proposed combination of Wolski, Quan and Schuurmans for at least the following reasons.

At the outset, Applicant respectfully submits that the Office Action fails to establish the level of ordinary skill in the art of invention of claim 18. As explained above with respect to claim 1, this is a fundamental requirement for maintaining a rejection under 35 U.S.C. § 103.

Furthermore, Applicant respectfully submits that the proposed combination of Wolski, Quan and Schuurmans with respect to claim 18 is supported only by conclusory statements. The Office Action fails to articulate reasons with rational underpinnings for the proposed combination of teachings. In particular, the Office Action fails to explain how or why anyone reading the teachings of Wolski would determine that “[i]t is desirable to have a system and method of controlling [a] RGB based LED luminary,” and therefore why it would have been obvious to anyone of ordinary skill in the art at the time of the invention to somehow modify Wolski to include Schuurmans’ RGB LED light sources.

Accordingly, for at least these additional reasons, Applicant respectfully submits that claim 18 is patentable over the cited art.

**NEW CLAIM 21**

New claim 21 depends from claim 17 and is deemed patentable for at least the reasons set forth above with respect to claim 17, and for the various novel features recited therein.

**CONCLUSION**

In view of the foregoing explanations, Applicant respectfully requests that the Examiner reconsider and reexamine the present application, allow claim 1-18 and 20-21 and pass the application to issue. In the event that there are any outstanding matters remaining in the present application, the Examiner is invited to contact Kenneth D. Springer (Reg. No. 39,843) at (571) 283.0720 to discuss these matters.

Respectfully submitted,

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